1. A method of forming an electrical device including providing a substrate having a first dielectric upper layer, forming a depression in said first dielectric upper layer, filling said depression with an electrically conductive film having an electrical resistivity and an upper surface that is co-planar with the first dielectric upper layer, said method comprising:

reacting a chemical composition with at least one monolayer of said upper surface; and

forming a second dielectric upper layer over said electrically conductive film and said first dielectric upper layer, wherein:

at least an exposed surface of the electrically conductive film is unoxidized;

said second dielectric upper layer is adhered to said electrically conductive film.

2. The method as define in Claim 1, wherein reacting a chemical composition with at least one monolayer of said upper surface comprises:

providing a nitrogen-containing composition;

heating said first dielectric upper layer; and

exposing said upper surface to said nitrogen-containing composition to form a chemical reaction compound having a higher resistance to oxidation than said electrically conductive film.

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3. The method as define in Claim 1, wherein forming a second dielectric upper layer over said electrically conductive film and said first dielectric upper layer comprises *in situ* depositing said second dielectric upper layer over said electrically conductive film and said first dielectric upper layer while simultaneously reacting said chemical composition with at least one monolayer of said upper surface.

4. The method as define in Claim 1, wherein forming a second dielectric upper layer over said electrically conductive film and said first dielectric upper layer comprises *in situ* depositing said second dielectric upper layer over said electrically conductive film and said first dielectric upper layer after reacting said chemical composition with at least one monolayer of said upper surface.

5. The method as define in Claim 1, wherein reacting said chemical composition with at least one monolayer of said upper surface forms a passivation layer upon said upper surface of said electrically conductive film.

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6. A method of forming an electrical device including providing a substrate having a first dielectric upper layer; forming a depression in said first dielectric upper layer, filling the depression with an electrically conductive film having an upper surface that is co-planar with the first dielectric upper layer, said method comprising:

reacting a chemical composition with at least one monolayer of said upper surface to form a passivation layer having a thickness not greater than about 50Å upon the upper surface; and

forming a second dielectric upper layer over said electrically conductive film and said first dielectric upper layer, wherein:

at least an exposed surface of the electrically conductive film is unoxidized;

said second dielectric upper layer is adhered to said electrically conductive film.

7. The method as define in Claim 6, wherein the passivation layer upon the upper surface has a thickness in a range from about 2Å to about 20Å.

8. The method as define in Claim 6, wherein reacting said chemical composition with said at least one monolayer comprises forming a passivation layer upon said upper surface that is adsorbed onto said at least one monolayer.

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9. The method as define in Claim 6, wherein said passivation layer is formed by the steps comprising:

forming a first layer by chemically reacting components of said chemical composition and said at least one monolayer; and

forming a second layer by adsorbing portions of said chemical composition onto said first layer.

10. A method of forming an electrical device, the method comprising:

forming an electrically conductive interconnect disposed within a first dielectric layer, said electrically conductive interconnect having an upper surface;

forming a first passivation layer disposed upon said upper surface, said first passivation layer including chemical reaction products and solid solution mixtures between said electrically conductive interconnect and a chemical compound; and

forming an ILD disposed upon said first dielectric layer and upon said upper surface, said ILD being continuously adhered to said upper surface.

11. The method as defined in Claim 10, wherein forming said electrically conductive interconnect further comprises:

forming a first titanium liner layer within a depression in said first dielectric layer;

forming a first titanium nitride layer upon said first titanium liner layer; and

forming a tungsten film upon said first titanium nitride layer so as to fill the depression.

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12. The method as defined in Claim 10, wherein forming said first passivation layer further comprises forming a first tungsten nitride layer upon said upper surface, wherein said first tungsten nitride layer has a thickness of less than about 50Å.

13. The method as defined in Claim 10, further comprising forming a second passivation layer comprising ammonia and its derivatives that is adsorbed upon said first passivation layer, wherein said first passivation layer comprises a tungsten nitride compound.

14. The method as defined in Claim 10, wherein said first passivation layer comprises a layer upon said upper surface comprising ammonia and its derivatives that is adsorbed upon said upper surface.

15. A method of forming an electrical device, the method comprising:

forming an electrically conductive interconnect disposed within a dielectric layer, said electrically conductive interconnect having an upper surface, and further including the steps of:

forming a titanium liner layer disposed within a depression in said dielectric layer;

forming a titanium nitride layer disposed upon said titanium liner layer; and

forming a tungsten film disposed upon said titanium nitride layer and filling said depression;

forming a passivation layer composed of tungsten nitride, disposed upon said upper surface, and having a thickness of less than about 50Å; and

forming an ILD disposed upon said dielectric layer and upon said upper surface, said ILD being continuously adhered to said upper surface.

16. A method of forming an electrical device, the method comprising:

forming an electrically conductive interconnect having an upper surface and being disposed within a dielectric layer, and further including the steps of:

forming a titanium liner layer disposed within a depression in said dielectric layer;

forming a titanium nitride layer disposed upon said titanium liner layer; and

forming a tungsten film disposed upon said titanium nitride layer and filling said depression;

forming a first passivation layer comprising a tungsten nitride compound and being disposed upon said upper surface;

forming a second passivation layer comprising ammonia and its derivatives that is adsorbed upon said first passivation layer; and

forming an ILD disposed upon said dielectric layer and upon said upper surface, said ILD being continuously adhered to said upper surface.

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17. A method of forming an electrical device, the method comprising:

forming an electrically conductive interconnect disposed within a dielectric layer, said electrically conductive interconnect having an upper surface, and further including the steps of:

forming a titanium liner layer disposed within a depression in said dielectric layer;

forming a titanium nitride layer disposed upon said titanium liner layer; and

forming a tungsten film disposed upon said titanium nitride layer and filling said depression;

forming a passivation layer disposed upon said upper surface comprising ammonia and its derivatives that are adsorbed upon said upper surface; and

forming an ILD disposed upon said dielectric layer and upon said upper surface, said ILD being continuously adhered to said upper surface.

18. A method of forming an interconnect in an electronic device, the method comprising:

forming a metallic structure disposed within a first silicon oxide layer, said metallic structure having an upper surface;

forming a passivation layer disposed upon said upper surface, said passivation layer including chemical reaction products and solid solution mixtures between said metallic structure and a chemical compound; and

forming a second silicon oxide layer disposed upon said first silicon oxide layer and upon said upper surface, said second silicon oxide layer being continuously adhered to said upper surface.

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19. The method as defined in Claim 18, wherein forming said metallic structure further comprises:

forming a titanium liner layer disposed within an interconnect corridor in said first silicon oxide layer;

forming a titanium nitride layer disposed upon said titanium liner layer; and

forming a tungsten film disposed upon said titanium nitride layer.

20. The method as defined in Claim 18, wherein:

said passivation layer further comprises forming a tungsten nitride layer disposed upon said upper surface; and

said tungsten nitride layer having a thickness of less than about 50Å.

21. The method as defined in Claim 18, further comprising forming a second layer comprising ammonia and its derivatives that is adsorbed upon said passivation layer, wherein said passivation layer comprises a tungsten nitride compound.

22. The method as defined in Claim 18, wherein said passivation layer comprises a layer upon said upper surface comprising ammonia and its derivatives that is adsorbed upon said upper surface.

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23. A method of forming an interconnect in an electronic device, the method comprising:

forming a metallic structure disposed within a first silicon oxide layer, said metallic structure having an upper surface, and further including the steps of:

forming a titanium liner layer disposed within an interconnect corridor in said first silicon oxide layer;

forming a titanium nitride layer disposed upon said titanium liner layer; and

forming a tungsten film disposed upon said titanium nitride layer;

forming a passivation layer composed of tungsten nitride, having a thickness of less than about 50Å, and being disposed upon said upper surface; and

forming a second silicon oxide layer disposed upon said first silicon oxide layer and upon said upper surface, said second silicon oxide layer being continuously adhered to said upper surface.

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24. A method of forming an interconnect in an electronic device, the method comprising:

forming a metallic structure disposed within a first silicon oxide layer, said metallic structure having an upper surface, and further including the steps of:

forming a titanium liner layer disposed within an interconnect corridor in said first silicon oxide layer;

forming a titanium nitride layer disposed upon said titanium liner layer; and

forming a tungsten film disposed upon said titanium nitride layer;

forming a first passivation layer disposed upon said upper surface and composed of a tungsten nitride compound;

forming a second layer comprising ammonia and its derivatives that is adsorbed upon said first passivation layer; and

forming a second silicon oxide layer disposed upon said first silicon oxide layer and upon said upper surface, said second silicon oxide layer being continuously adhered to said upper surface

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25. A method of forming an interconnect in an electronic device, the method comprising:

forming a metallic structure disposed within a first silicon oxide layer, said metallic structure having an upper surface, and further including the steps of:

forming a titanium liner layer disposed within an interconnect corridor in said first silicon oxide layer;

forming a titanium nitride layer disposed upon said titanium liner layer; and

forming a tungsten film disposed upon said titanium nitride layer;

forming a passivation layer disposed upon said upper surface and composed of ammonia and its derivatives that is adsorbed upon said upper surface; and

forming a second silicon oxide layer disposed upon said first silicon oxide layer and upon said upper surface, said second silicon oxide layer being continuously adhered to said upper surface.

add a6

add c6

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